CLAIMS

1. A corrosion prevention method, comprising:

stacking steel layers to form a lamination;

fixing the layers to one another;

vacuum impregnating the lamination with an acrylic resin, which has a high permeability, to fill gaps, which exist between the stacked layers, with the acrylic resin;

curing the acrylic resin; and

applying an insulation coating to the lamination.

2. A corrosion prevention method according to Claim 1, wherein vacuum impregnating the lamination further comprises:

dipping the lamination in liquid acrylic resin in a container, wherein air is exhausted to create a vacuum within the container, and

applying pressure inside the vacuum container to pressurize the container.

3. A corrosion prevention method according to Claim 1, wherein curing the acrylic resin comprises immersing the lamination in warm water.

4. A corrosion prevention method according to Claim 2, wherein curing the acrylic resin further comprises immersing the lamination in warm water.

5. A corrosion prevention method according to Claim 1, further comprising applying a shot blasting treatment to the lamination after curing the acrylic resin.

6. A corrosion prevention method according to Claim 2, further comprising applying a shot blasting treatment to the lamination after curing the acrylic resin.

7. A corrosion prevention method according to Claim 3, further comprising applying a shot blasting treatment to the lamination after curing the acrylic resin.

8. A corrosion prevention method according to Claim 1, wherein the application of an insulation coating includes using anion electro deposition.

9. A method of producing a stator stack, comprising:

press punching a plurality of thin plates to form a annular plates;

laminating and fixing the annular plates to form a stator;

vacuum-impregnating the stator with resin to fill gaps, which exist between the plates, with the resin;

curing the resin by heating the stator to a predetermined temperature;

applying a shot blasting treatment to the stator to remove excess cured resin;

applying an insulating coating to the stator; and

mounting insulators on opposite sides of the stator.

10. A method of producing a stator according to Claim 9, wherein the plates include silicon steel.

11. A method of producing a stator stack according to Claim 9, wherein the resin includes an acrylic resin.

12. A method of producing a stator stack according to Claim 9, wherein the application of the insulating coating further comprises using anion electrodeposition.

13. A method of producing a stator according to Claim 9, further comprising:

coiling windings around fixed magnetic poles of the stator core;

varnishing the windings to prevent shifting of the windings; and

drying the windings.

14. A stator, comprising:

a laminated stack including gaps between layers of the stack, two opposed side surfaces, edges, and fixed magnetic poles;

resin impregnating the gaps of the laminated stack;

an insulator provided on each of opposed side surfaces of the of laminated stack; and

a plurality of windings coiled around the fixed magnetic poles of the laminated stack.

15. A stator according to Claim 14, wherein the laminated stack includes a plurality of steel plates.

16. A stator according to Claim 14, wherein the resin includes an acrylic resin.

17. A stator according to Claim 15 further comprising an insulation layer covering the impregnated resin.